# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/881,791 | 06/14/2001 | Arzhan I Kinzhalin | SUNMP016 | 1614 |

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| EXAMINER |
|---|
| ZHEN, WEI Y |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2191 | |

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 09/881,791 | KINZHALIN ET AL. |
| | Examiner | Art Unit | |
| | Wei Y. Zhen | 2191 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on _14 March 2005_.

2a)☒ This action is **FINAL**.    2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☐ Claim(s) _____ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All    b)☐ Some *    c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

U.S. Patent and Trademark Office

PTOL-326 (Rev. 1-04)    Office Action Summary    Part of Paper No./Mail Date 20050607

1.     This office action is in response to the amendment filed on 3/18/2005.

2.     Claims 1-20 are pending.

## *Claim Rejections - 35 USC § 112*

3.     The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 8-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with

the written description requirement. The claim(s) contains subject matter which was not

described in the specification in such a way as to reasonably convey to one skilled in the relevant

art that the inventor(s), at the time the application was filed, had possession of the claimed

invention. Specifically, claims 8-20 are amended to recite the limitation of "a computer readable

media". This newly added limitation is found no where in the specification, therefore, it is

subject matter which was not described in the specification in such a way as to reasonably

convey to one skilled in the relevant art that the inventor(s), at the time the application was filed,

had possession of the claimed invention. For the purpose of applying rejection, the claims are

interpreted as without the limitation of "computer readable media".

## *Claim Rejections - 35 USC § 101*

4.     35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to

non-statutory subject matter. Claims 1-7 recites steps of acquisition of assertions in a

specification of a computer program which can be performed by a person as a mental step or

using pencil and paper. It cannot be determined from the claim limitation that any of the step

require a presence of hardware/machine. Therefore, the language of the claim raises a question

as to whether the claim is directed merely to an abstract idea that is not tied to a technological

art, environment or machine which would result in a practical application producing a concrete,

useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

Claims 8-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed

to non-statutory subject matter (see the previous office action for the rejection to these claims).


### *Claim Rejections - 35 USC § 103*

5.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pavela (US

6,332,211, hereinafter Pavela) in view of Microsoft Press Computer Dictionary (MPCD)

With respect to claim 1, Pavela discloses a method for automated acquisition of

assertions in a specification of a computer program:

receiving an input specification (source file), wherein the input specification comprises a

plurality of sentences (commands or tags) (E.g., see FIG. 2:202, 01. 2:12-17);

obtaining a sentence (tag or a test code object) from the plurality of sentences; (E.g., see

FIG. 5:504, col. 6:4);

determining whether the obtained sentence is a testable (executable test code object)

assertion (tag), wherein the testable assertion describes behavior of program that can be tested

(E.g., see col 6:28-30, tags are associated with the members of the library of executable test code

object; and

marking (indexing) the obtained sentence as testable when the obtained sentence is a

testable assertion, using the sentences marked as testable to determine whether a test suite for

testing the computer program is adequate (E.g., see FIG. 3:320, col. 6:47 a test index is

automatically generated from the identified system elements).

Pavela does not discloses application programming interface.

However, MPCD discloses application programming interface (p. 28). Therefore, it

would have been obvious to incorporate the teaching of MPCD into Pavela to have the testable

assertion describes behavior of application programming interface that can be tested because one

would want to test application programming interface as well as other section of the computer

program.

As per claim 2, Pavela also discloses identifying a context (tags) within the specification

(E.g., see FIG. 7:702, col. 7:23-44).

With respect to claim 3, Pavela further discloses a method wherein the operation of

obtaining the sentence from the plurality of sentences includes parsing (scanning and identifying)

the context to obtain the sentence (E.g., see FIG. 7:706, col. 14:24-25, performing the step of

scanning the interpreted tags to identify the system elements).

With respect to claim 4, Pavela also discloses a method further comprising the operation

of adding (incorporating) the marked obtained sentence to an assertion result set (E.g., see col.

11:30-32, a test index identifying system elements test code is generated and incorporated into

the test plan).

With respect to claim 5, Pavela further discloses a method wherein the context is a set of

circumstances (configuration) related to the obtained sentence (E.g., see col. 5:48-50, test

procedures, verification, system configuration, and the parts used by the test case are entered).

With respect to claim 6, Pavela further discloses a method wherein each assertion

includes at least one sentence of the specification (E.g., see col. 5:5-7, each tag is associated

with a member of a library of executable code objects).

With respect to claim 7, Pavela further discloses a method wherein each assertion can

comprises at least two sentences of the specification (See FIG. 52502 and 5:504, wherein test

scenario is specified by the plurality of lines; col. 2:3245, 11:24-26, each tag is associated with a

member of a Library of executable code objects defining a set of instructions).

With respect to claim 8, Pavela discloses automatically obtaining assertions from a

specification for a computer program, comprising:  a code segment that receives the specification

as an input (E.g., see col. 2:12-17, this claim is directed to a different class of statutory subjected

matter than claim 1, but recites the same limitations as method claim 1. Since the reference

teaches every Limitation of claim 1, it therefore also reads on every limitation of this claim);

a code segment that identifies a context within the input specification (E.g., see col.

6:45, this claim is directed to a different class of statutory subject matter than claim 2, but recites

the same limitations as method claim 2. Since the reference teaches every limitation of claim 2, it

therefore also reads on every limitation of this claim);

a code segment that parses the identified context to obtain sentences (E.g., see col.

14:24-25, this claim is directed to a different class: of statutory subject matter than claim 3, but

recites the same limitations as method claim 3. Since the reference teaches every limitation of

claim 3, it therefore also reads on every limitation of this claim );

a code segment that determines whether the obtained sentences are testable assertions

wherein each testable assertion is a sentence that describes behavior of a program that can be

tested (E.g., see *1. 6:28-30, this claim is directed to a different class of statutory subject matter

than claim 1.3, but recites the same limitations as method claim 1.3. Since the reference teaches

every limitation of claim 1.3, it therefore also reads on every limitation of this claim);

a code segment that adds (include) the testable assertions to an assertion result set (a list

of desired system elements that are included in a test plan), wherein the assertion result set can

be used to facilitate (allow) testing (verifying) of the specification (E.g., see col. 2:18-21 , a test

index identifying system elements tested by the test code is generated and incorporated into the

test plan, allowing the user to verify that all desired system elements are exercised by the

automated test code).

Pavela does not discloses application programming interface.

However, MPCD discloses application programming interface (p. 28). Therefore, it

would have been obvious to incorporate the teaching of MPCD into Pavela to have the testable

assertion describes behavior of application programming interface that can be tested because one

would want to test application programming interface as well as other section of the computer

program.

With respect to claim 9, Pavela also discloses a computer program further comprising a

code segment that filters (scans) the identified context prior to parsing (interpreting/translating)

the context (E.g., see FIG. 3:319,325, col. 6:45-50, tags are scanned to identify system elements,

col. 6:24-44, tags are interpreted, translated, and conversational language statement are

generated).

With respect to claim 10, Pavela further discloses the code segment that receives the

specification is defined to receive the specification in a text format (E.g., see FIG. 6 and 8, col.

6:6-9 test objects which is operable of performing an assigned function in support of the

automated test procedure; col.7:34-35test code has been generated can be executed).

With respect to claim 14, Pavela discloses automated acquisition of assertions in a

specification of a computer program, comprising: a code segment that receives an input

specification, wherein the input specification comprises a plurality of sentences (E.g. see col.

2:12-17, this claim is directed to a different class of statutory subject matter than claim 1.1, but

recites the same limitations as method claim 1.1. Since the reference teaches every limitation of

claim 1.1, it therefore also reads on every limitation of this claim;

a code segment that obtains a sentence from the plurality of sentences (E.g., see col. 6:4,

this claim is directed to a different class of statutory subject matter than claim 1.2, but recites the

same limitations as method claim 1.2. Since the reference teaches every limitation of claim 1.2, it

therefore also reads on every limitation of this claim;

a code segment that determines whether the obtained sentence is a testable assertion, wherein the testable assertion describes behavior of a program that can be tested (E.g., see col. 6:28-30, this claim is directed to a different class of statutory subject matter than claim 8, but recites the same limitations as method claim 8. Since the reference teaches every limitation of claim 8, it therefore also reads on every limitation of this claim;

and a code segment that marks the obtained sentence as testable when the obtained sentence is a testable assertion (E.g., see col. 11:30-32., 2:18-21, this claim is directed to a different class of statutory subject matter than claims 4 and 8, but recites the same limitations as method claims 4 and 8. Since the reference teaches every limitation of claims 4 and 8, it therefore also reads on every limitation of this claim).

Pavela does not discloses application programming interface.

However, MPCD discloses application programming interface (p. 28). Therefore, it would have been obvious to incorporate the teaching of MPCD into Pavela to have the testable assertion describes behavior of application programming interface that can be tested because one would want to test application programming interface as well as other section of the computer program.

With respect to claim 15, Pavela also discloses a computer program further comprising a code segment that identifies a context within the specification (E.g., see col. 6:45, this claim is directed to a different class of statutory subject matter than claim 2, but recites the same limitations as method claim 2. Since the reference teaches every limitation of claim 2, it therefore also reads on every limitation of this claim).

Claim 11 and 18 are both rejected on the same base of claim 5.

Claim 12 and 19 are both rejected on the same base of claim 6.

Claim 13 and 20 are both rejected on the same base of claim 7.

Claim 15 is rejected on the same base of claim 2.

Claim 16 is rejected on the same base of claim 3

Claim 17 is rejected op the same base of claim 4.

### *Response to Arguments*

6.      Applicant's arguments filed 3/18/2005 have been fully considered but they are not

persuasive.    ,

Applicant has argued substantially as followed:

1)      With respect to claims 1, 8 and 14, Pavela does not teach receiving a specification of a

computer program as an input, the source file of Pavela is not described as including a plurality

of sentences describing the computer program.

Examiner's response:

1)      Examiner respectfully disagrees applicant's assertion that Pavela does not teach receiving

a specification of a computer program as an input. Pavela clearly discloses this limitation at col.

2 lines 12-17, the source file includes a member of a library of executable code objects defining a

set of instructions (a specification of computer program as an input).

Applicant's argument:

2)      With respect to claims 1, 8 and 14, Pavela does not teach determining whether a sentence

obtaining from the specification of the computer program is a testable assertion, wherein the

testable assertion describes behavior of an application programming interface that can be tested.

The tag of Pavela does not describe behavior of a testable application programming interface.

Examiner's response:

2)      Pavela clearly disclose determining whether a sentence obtaining from the specification

of the computer program is a testable assertion, wherein the testable assertion describes behavior

of program that can be tested at col. 2 lines 12-17 and col. 6 lines 28-30. MPCD is cited to

discloses application programming interface. One cannot show nonobviousness by attacking

references individually where the rejections are based on combinations of references. See *In re*

*Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231

USPQ 375 (Fed. Cir. 1986).


Applicant's argument:

3)      With respect to claim 8, Pavela does not teach identification of a context within the

specification of the computer program.

Examiner's response:

3)      Pavela clearly discloses identification of a context within the specification of the

computer program at col. 6 line 45 (The tags in the source file 318 are scanned to identify system

elements 132 that are tested by the test case).


*Conclusion*

7.      Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action.  Accordingly, **THIS ACTION IS MADE FINAL**.  See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action.  In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action.  In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this
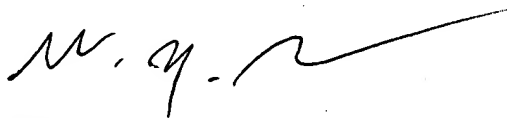
final action.

8.      Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Wei Y. Zhen whose telephone number is (571) 272-3708.  The

examiner can normally be reached on Monday-Friday, 8 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Tuan Dam can be reached on (571) 272-3695.  The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wei Zhen
6/13/2005

WEI Y. ZHEN
PRIMARY EXAMINER